

Amendments to the Claims:

1 – 18 (canceled)

19. (currently amended) A high temperature gas turbine component comprising:
a root section;
a platform section arranged adjacent to the root section;
a tip section arranged radially opposite the root section;
a leading edge arranged between the platform and tip sections;
a trailing edge arranged downstream of the leading edge; and
a main section arranged between the leading edge, trailing edge, platform section and tip sections,

wherein, a nickel-based superalloy of the component is precipitation strengthened by the addition of 50 ppm to 500 ppm of a strength promoter selected from the group consisting of:

zinc (Zn),
tin (Sn),
gallium (Ga),
selenium (Se), and
arsenic (As), and

wherein a material of the component includes an isotropic distribution, directionally solidified, or single-crystal grain structure.

20. (canceled)

21. (currently amended) The component as claimed in claim 2120, wherein the nickel-based superalloy, further comprises (percent by weight):

11 - 13% chromium,
3 - 5% tungsten,
0.5 - 2.5% molybdenum,
3 - 5% aluminum,
3 - 5% titanium,
3 - 7% tantalum,
0 - 12% cobalt,
0 - 1% niobium,
0 - 2% hafnium,
0 - 1% zirconium,
0 - 0.05% boron,
0 - 0.2% carbon,
0.1 - 10% rhenium or ruthenium, and
remainder nickel, cobalt or iron and impurities.

22. (currently amended) The component as claimed in claim 2120, whercin the nickel-based superalloy further comprises (percent by weight):

9 - <11% chromium,
3 - 5% tungsten,
0.5 - 2.5% molybdenum,
3 - 5% aluminum,
3 - 5% titanium,
3 - 7% tantalum,
0 - 12% cobalt,
0 - 1% niobium,
0 - 2% hafnium,
0 - 1% zirconium,
0 - 0.05% boron,
0 - 0.2% carbon,
0.1 - 5% ruthenium, or rhenium, and
remainder nickel, cobalt or iron and impurities.

23. (currently amended) A gas turbine high temperature resistant component made from a precipitant containing alloy, comprising:

a metallic strength promoter in an amount of 50 ppm to 500 ppm that increases the strength of the component by increasing the formation of precipitants where the strength promoter is selected from the group consisting of:

zinc (Zn),
tin (Sn),
gallium (Ga),
selenium (Se), and
arsenic (As),

wherein the component consists of a nickel-based superalloy, and
wherein a material of the component includes an isotropic distribution, directionally
solidified, or single-crystal grain structure.

24. (canceled)

25. (canceled)

26. (currently amended) The component as claimed in claim 23, wherein the nickel-base superalloy contains between 100 to 500 ppm of the strength promoter.

27. (previously presented) The component as claimed in claim 24, wherein the superalloy, further comprises (percent by weight):

11 - 13% chromium,
3 - 5% tungsten,
0.5 - 2.5% molybdenum,
3 - 5% aluminum,
3 - 5% titanium,
3 - 7% tantalum,
0 - 12% cobalt,
0 - 1% niobium,
0 - 2% hafnium,
0 - 1% zirconium,
0 - 0.05% boron,
0 - 0.2% carbon,
0.1 - 10% rhenium or ruthenium, and
remainder nickel, cobalt or iron and impurities.

28. (currently amended) The component as claimed in claim 24, wherein the nickel-base superalloy further comprises (percent by weight):

9 - <11% chromium,
3 - 5% tungsten,
0.5 - 2.5% molybdenum,
3 - 5% aluminum,
3 - 5% titanium,
3 - 7% tantalum,
0 - 12% cobalt,
0 - 1% niobium,
0 - 2% hafnium,
0 - 1% zirconium,
0 - 0.05% boron,
0 - 0.2% carbon,
0.1 - 5% ruthenium, or rhenium, and
remainder nickel, cobalt or iron and impurities.

29. (previously presented) The component as claimed in claim 28, wherein the superalloy contains 3 - less than 3.5 aluminum percent by weight.

30. (previously presented) The component as claimed in claim 27, wherein the rhenium content is 1.3 - 10 percent by weight.

31. (previously presented) The component as claimed in claim 27, wherein the rhenium content is 1.3 - 5 percent by weight.

32. (previously presented) The component as claimed in claim 31, wherein the ruthenium content is 1.3 - 3 percent by weight.

33. (previously presented) The component as claimed in claim 28 wherein the ruthenium content is 0.5 - 5 percent by weight.

34. (canceled)

35. (canceled)

36. (currently amended) The component as claimed in claim 2324, wherein the precipitant precipitation is atthe gamma phase.

37. (canceled)

38. (currently amended) A gas turbine engine, comprising:
a rotationally mounted rotor arranged coaxially with atthe longitudinal axis of the engine;
an intake housing arranged coaxially with the rotor that intakes a working fluid;
a compressor that compresses the working fluid;
an annular combustion chamber comprised of a plurality of components that accepts the compressed working fluid, mixes a fuel with the compressed working fluid and combusts the compressed working fluid and fuel mixture to create a hot working fluid; and

a turbine section that expands the hot working fluid, wherein at least one the combustion chamber or a turbine component is formed from a nickel—eebalt—or iron superalloy that is precipitation strengthened by the addition of 50 ppm to 500 ppm of a strength promoter selected from the group consisting of:

zinc (Zn),

tin (Sn),

gallium (Ga),

selenium (Se), and

arsenic (As),

wherein a material of the combustion chamber or the turbine component includes an isotropic distribution, directionally solidified, or single-crystal grain structure.

39. (currently amended) A high temperature gas turbine component comprising:
a root section;
a platform section arranged adjacent to the root section;
a tip section arranged radially opposite the root section;
a leading edge arranged between the platform and tip sections;
a trailing edge arranged downstream of the leading edge; and
a main section arranged between the leading edge, trailing edge, platform section and tip sections,

wherein, a nickel-based superalloy of the component is precipitation strengthened by the addition of 100 ppm to 500 ppm of a strength promoter, and

wherein the strength promoter is tin (Sn), and

wherein a material of the gas turbine component includes an isotropic distribution, directionally solidified, or single-crystal grain structure..

40. (previously presented) The component as claimed in claim 26, wherein the selected strength promoter is tin.

41. (previously presented) The engine as claimed in claim 38, wherein the selected strength promoter is tin.

42. (previously presented) The component as claimed in claim 41, wherein the superalloy contains between 100 to 500 ppm of the strength promoter.

43 – 44 (canceled).